

CLAIMS

- [1] An ultrasonic diagnosis apparatus, comprising:
- first storage means for storing digital reception beam data converted from a reception beam formed from an ultrasonic received signal;
- 5 first control means for controlling reading and writing of data from/in the first storage means;
- a filter coefficient calculation portion for calculating a filter coefficient based on information on the reception beam, the information including a positional relationship between the reception beam and a transmission beam;
- 10 and
- a first spatial filter operation portion for subjecting each of a plurality of the reception beam data including data of beams received in parallel from a single transmission beam to filtering processing for reducing a difference in image quality between adjacent beams based on the filter coefficient,
- 15 wherein image data output from the first spatial filter operation portion are converted into scanning of a display monitor so as to display an image on the display monitor.
- [2] The ultrasonic diagnosis apparatus according to claim 1, further comprising:
- 20 a two-dimensional Doppler signal processing portion for subjecting reception beam data from an ultrasonic reception data processing portion to two-dimensional Doppler processing;
- second storage means for storing two-dimensional Doppler data output from the two-dimensional Doppler signal processing portion;
- 25 second control means for controlling reading and writing of data from/in the second storage means; and
- a second spatial filter operation portion for subjecting each of a plurality of the received two-dimensional Doppler data including data of

beams received in parallel from a single transmission beam to filtering processing for reducing a difference in image quality between adjacent beams based on the filter coefficient supplied from the filter coefficient calculation portion.

5 [3] The ultrasonic diagnosis apparatus according to claim 1 or 2, wherein the filter coefficient calculation portion is able to control the filter coefficient in accordance with a receiving depth.

[4] The ultrasonic diagnosis apparatus according to claim 1 or 2, wherein the filter coefficient calculation portion is able to control the filter coefficient 10 in accordance with an angle of the reception beam.

[5] The ultrasonic diagnosis apparatus according to claim 1 or 2, wherein the filter coefficient calculation portion is able to control the filter coefficient in accordance with a focal position of the transmission beam.